

**Commonwealth of Kentucky**  
**Natural Resources and Environmental Protection Cabinet**  
**Department for Environmental Protection**  
**Division for Air Quality**  
**803 Schenkel Lane**  
**Frankfort, Kentucky 40601**  
**(502) 573-3382**

**STATE ORIGIN**  
**AIR QUALITY PERMIT**

**Permittee Name:** Western State Hospital  
**Mailing Address:** P.O. Box 2200  
Hopkinsville, KY 42241

**Source Name:** Western State Hospital  
**Mailing Address:** Same as above  
**Source Location:** Hopkinsville/Christian County

**KYEIS ID #:** 21-047-00109  
**SIC Code:** 8062

**Regional Office** Paducah Regional Office  
4500 Clarks River Road  
Paducah, KY 42003  
(270) 898-8468

**County:** Christian

**Permit Number:** S-02-109  
**Log Number:** 54315  
**Permit Type:** Construction/Operating

**Application**  
**Complete Date:** October 16, 2002  
**Issuance Date:** February 26, 2003  
**Expiration Date:** February 26, 2013

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**John S. Lyons, Director**  
**Division for Air Quality**

## **SECTION A - PERMIT AUTHORIZATION**

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify an affected facility without first having submitted a complete application and receiving a permit for the planned activity from the Division, except as provided in this permit or in 401 KAR 52:040, State-origin permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining other permits, licenses, or approvals that may be required by the Cabinet or other federal, state, or local agencies.

## **SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS**

**Emissions Unit: 01, 02, and 03 – Natural Gas/Oil Fired Indirect Heat Exchangers**

### **Description:**

- 01** Cleaver Brooks
- 02** Cleaver Brooks
- 03** Cleaver Brooks

Primary Fuel:	Natural Gas
Backup Fuel:	Fuel Oil #2
Rated Capacity:	12.56 mmBTU/hr each
Constructed:	To be installed approximately March 2003

### **APPLICABLE REGULATIONS:**

Regulation 401 KAR 59:015, New indirect heat exchangers, applicable to an emissions unit with a rated capacity less than 250 MMBTU/hr which commenced on or after April 9, 1972.

401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart Dc, Standards of performance for small industrial-commercial-institutional steam generating units.

#### **1. Operating Limitations:**

The backup fuel oil consumption shall not exceed 2,820 gallons per year for all three (3) boilers on a 12 month rolling total.

#### **2. Emission Limitations:**

- a) Pursuant to Regulation 59:015, Section 4(1)(C), Particulate Matter emissions shall not exceed 0.39 pounds per MMBTU based on a three-hour average.
- b) Pursuant to Regulation 59:015, Section 5(1)(C), Sulfur Dioxide emissions shall not exceed 1.74 pounds per MMBTU based on a 24-hour average.
- c) Pursuant to Regulation 401 KAR 59:015, Section 4(2), emissions shall not exceed 20 percent opacity based on a six-minute average, except that a maximum of 40% opacity based on a six minute average shall be permitted for not more than 6 consecutive minutes in any consecutive 60 minutes during cleaning the fire-box or blowing soot.
- d) Each unit is considered to be in compliance with the PM, SO<sub>2</sub>, and opacity standards while burning natural gas.

## **SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS**

**3. Testing Requirements:**

The permittee shall determine the opacity of emissions from the stack using U.S. EPA Reference Method 9 annually, or more frequently if requested by the Division.

**4. Monitoring Requirements:**

The Permittee shall monitor the fuel usage on a monthly basis.

**5. Record Keeping Requirements:**

Records of the amount of natural gas and #2 fuel oil burned shall be maintained on a monthly basis.

**6. Reporting Requirements:**

- a. If #2 fuel oil is burned in the unit, the permittee shall submit quarterly reports including the fuel supplier certification and a certified statement signed by the owner or operator of the affected facility that the records of the fuel supplier certifications submitted represent the #2 fuel oil combusted during that quarter.
- b. See Section F.

## **SECTION C - GENERAL CONDITIONS**

### **A. Administrative Requirements**

1. The permittee shall comply with all conditions of this permit. Noncompliance shall be a violation of 401 KAR 52:040, Section 3(1)(b) and is grounds for enforcement action including but not limited to the termination, revocation and reissuance, or revision of this permit.
2. This permit shall remain in effect for a fixed term of ten (10) years following the original date of issuance. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division [401 KAR 52:040, Section 15].
3. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit  
[Cabinet Provisions and Procedures for Issuing State-Origin Permits, Section 1a, 11].
4. This permit may be revised, revoked, reopened, reissued, or terminated for cause. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance shall not stay any permit condition [Cabinet Provisions and Procedures for Issuing State-Origin Permits, Section 1a, 4,5].
5. This permit does not convey property rights or exclusive privileges [Cabinet Provisions and Procedures for Issuing State-Origin Permits, Section 1a, 8].
6. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:040 Section 11(3)].
7. This permit shall be subject to suspension at any time the permittee fails to pay all fees within 90 days after notification as specified in 401 KAR 50:038, Air emissions fee. The permittee shall submit an annual emissions certification pursuant to 401 KAR 52:040, Section 20.
8. All previously issued construction and operating permits are hereby subsumed into this permit.

## **SECTION C - GENERAL CONDITIONS (CONTINUED)**

### **B. Recordkeeping Requirements**

1. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of at least five years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [401 KAR 52:040 Section 3(1)(f)].
2. The permittee shall perform compliance certification and recordkeeping sufficient to assure compliance with the terms and conditions of the permit. Documents, including reports, shall be certified by a responsible official [401 KAR 52:040, Section 21].

### **C. Reporting Requirements**

1. a. In accordance with the provisions of 401 KAR 50:055, Section 1 the permittee shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
  - i. When emissions during any planned shutdowns and ensuing startups will exceed the standards, notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
  - ii. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards, notification shall be made as promptly as possible by telephone (or other approved electronic media) and shall cause written notice upon request.
- b. The permittee shall promptly report deviations from permit requirements including those attributed to upset conditions (other than emission exceedances covered by 1.a above), the probable cause of the deviation, and corrective or preventive measures taken; to the Regional Office listed on the front of this permit within 30 days. Other deviations from permit requirements shall be included in the semiannual report [Cabinet Provisions and Procedures for Issuing State-Origin Permits, Section 5, 3].
2. The permittee shall furnish information requested by the cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or compliance with the permit. [Cabinet Provisions and Procedures for Issuing State-Origin Permits, Section 1a, 8].
3. Summary reports of monitoring required by this permit shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation.

## **SECTION C - GENERAL CONDITIONS (CONTINUED)**

The summary reports are due January 30th and July 30th of each year. A responsible official shall certify all reports. All deviations from permit requirements shall be clearly identified in the reports [401 KAR 52:040, Section 21].

## **SECTION C - GENERAL CONDITIONS (CONTINUED)**

### **D. Inspections**

1. In accordance with the requirements of 401 KAR 52:040, Section 3(1)(f) the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times:
  - a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation;
  - b. To access and copy any records required by the permit;
  - c. Inspect, at reasonable times, any facilities, equipment (including monitoring and pollution control equipment), practices, or operations required by the permit. Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency.
  - d. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.

### **E. Emergencies/Enforcement Provisions**

1. The permittee shall not use as defense in an enforcement action, the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Cabinet Provisions and Procedures for Issuing State-Origin Permits, Section 1a, 3].
2. An emergency shall constitute an affirmative defense to an action brought for the noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or relevant evidence that:
  - a. An emergency occurred and the permittee can identify the cause of the emergency;
  - b. The permitted facility was at the time being properly operated;
  - c. During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
  - d. The permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division within two working days after the time when emission limitations were exceeded due to the emergency and included a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
3. Emergency provisions listed in General Condition E.2 are in addition to any emergency or upset provision contained in an applicable requirement.
4. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof.



## SECTION C - GENERAL CONDITIONS (CONTINUED)

### F. Compliance

1. Periodic testing or instrumental or non-instrumental monitoring, which may consist of record keeping, shall be performed to the extent necessary to yield reliable data for purposes of demonstration of continuing compliance with the conditions of this permit. For the purpose of demonstration of continuing compliance, the following guidelines shall be followed:
  - a. Pursuant to 401 KAR 50:055, General compliance requirements, Section 2(5), all air pollution control equipment and all pollution control measures proposed by the application in response to which this permit is issued shall be in place, properly maintained, and in operation at any time an affected facility for which the equipment and measures are designed is operated, except as provided by 401 KAR 50:055, Section 1.
  - b. All the air pollution control systems shall be maintained regularly in accordance with good engineering practices and the recommendations of the respective manufacturers. A log shall be kept of all routine and non-routine maintenance performed on each control device.
  - c. A log of the monthly raw material consumption and monthly production rates shall be kept available at the facility. Compliance with the emission limits may be demonstrated by computer program, spread sheets, calculations or performance tests as may be specified by the Division.
2. Pursuant to 401 KAR 52:040, Section 19, the permittee shall certify compliance with the terms and conditions contained in this permit by January 30th of each year, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an approved alternative) to the Regional Office listed on the front of this permit in accordance with the following requirements:
  - a. Identification of the term or condition;
  - b. Compliance status of each term or condition of the permit;
  - c. Whether compliance was continuous or intermittent;
  - d. The method used for determining the compliance status for the source, currently and over the reporting period, and
  - e. For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.
  - f. The certification shall be postmarked by January 30th of each year. Annual compliance certifications should be mailed to the following addresses:

Division for Air Quality Paducah Regional Office 4500 Clarks River Road Paducah, KY 42003	Division for Air Quality Central Files 803 Schenkel Lane Frankfort, KY 40601-1403
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## **SECTION C - GENERAL CONDITIONS (CONTINUED)**

3. Permit Shield - A permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of permit issuance. Compliance with the conditions of this permit shall be considered compliance with all:
  - (a) Applicable requirements that are included and specifically identified in this permit; or
  - (b) Non-applicable requirements expressly identified in this permit.

## SECTION C - GENERAL CONDITIONS (CONTINUED)

### G. Construction Requirements:

1. Pursuant to 401 KAR 52:040, Section 12(3), unless construction is commenced on or before 18 months after the date of issuance of this permit, or if construction is commenced and then stopped for any consecutive period of 18 months or more, or is not completed within a reasonable timeframe then the construction and operating authority granted by this permit for those affected facilities for which construction was not completed shall immediately become invalid. Upon a written request, the Cabinet may extend these time periods if the source shows good cause.
2. Pursuant to 401 KAR 52:040, Section 12(4)(a) and 401 KAR 59:005, General provisions, Section 3(1), within 30 days following construction commencement, within 15 days following start-up and attainment of maximum production rate, or within 15 days following the issuance date of this permit, whichever is later, the owner and/or operator of the affected facilities specified on this permit shall furnish to the Regional Office listed on the front of this permit, with a copy to the Division's Frankfort Central Office, the following:
  - a. Date when construction commenced, (See General Condition G.1).
  - b. Start-up date of each of the affected facilities listed on this permit.
  - c. Date when maximum production rate was achieved, (See General Condition G.3.b).
3.
  - a. Pursuant to 401 KAR 59:005, General provisions, Section 2(1), this permit shall allow time for the initial start-up, operation and compliance demonstration of the affected facilities listed herein. However, within 60 days after achieving the maximum production rate at which the affected facilities will be operated, but not later than 180 days after initial start-up of such facilities, the owner or operator shall demonstrate compliance to a duly authorized representative of the Division.
  - b. Pursuant to 401 KAR 59:005, General provisions, Section 3(1)(b), unless notification and justification to the contrary are received by this Division, the date of achieving the maximum production rate at which the affected facilities will be operated shall be deemed to be 30 days after initial start-up.
  - c. Pursuant to Section VII 2.(1) of the policy manual of the Division for Air Quality as referenced by 401 KAR 50:016, Section 1.(1), at least 30 days prior to the date of the required performance test(s), the permittee shall complete and return a Compliance Test Protocol (Form DEP 6027) to the Division's Frankfort office. The protocol form shall be utilized by the Division to determine if a pretest meeting is required. Pursuant to 401 KAR 50:045, Section 5, the Division shall be notified of the actual test date at least 10 working days prior to the test(s).
  - d. Pursuant to Section VII.3 of the policy manual of the Division for Air Quality as referenced by 401 KAR 50:016, Section 1.(1), results of performance test(s) required by the permit shall be submitted to the Division by the source or its representative within forty-five days after the completion of the fieldwork.

## **SECTION C - GENERAL CONDITIONS (CONTINUED)**

- e. Pursuant to Section VII 1(2 and 3) of the policy manual of the Division for Air Quality as referenced by 401 KAR 50:016, Section 1.(1), if a demonstration of compliance, through performance testing was made at a production rate less than the maximum specified in the application form, then the permittee is only authorized to operate at a rate that is not greater than 110% of the rate demonstrated during performance testing. If and when the facility is capable of operation at the rate specified in the application, compliance must be demonstrated at the new production rate if required by the Division.
- 4. Operation of the affected facilities authorized by this permit shall not commence until compliance with applicable standards specified herein has been demonstrated in accordance with the requirements of 401 KAR 52:040, Section 12(4)(b). Until compliance is demonstrated, the source may only operate for the purpose of demonstrating compliance.